POSTER COMMUNICATION

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# Pulmonary rehabilitation on inflammatory mediators and IgA in patients with COPD

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Patients with chronic obstructive pulmonary disease (COPD) have a deregulated immune response and show altered levels of pro/anti-inflammatory cytokines and of secretory IgA (SIgA), a first-line airway defense mechanism in the lungs. Pulmonary rehabilitation (PR) leads to physiological and psychosocial improvements in COPD, but its impact on levels of inflammatory mediators remains unclear. This study aimed to (i) compare the levels of inflammatory mediators (e.g. IL-6 and IL-8) and SIgA in saliva of patients with COPD and healthy donors; (ii) evaluate the impact of PR on these mediators and correlate their levels with clinical data.

Outpatients with COPD were enrolled in a PR programme twice a week during 3 months.

Clinical data (e.g., sociodemographic, anthropometrics, muscle strength-handgrip and exercise tolerance-6-minutes walk test [6MWT]) were collected 3 months before, immediately before, after and 3 months after the PR programme. Eleven age and sex matched healthy subjects were evaluated once. Saliva samples were collected every month and stored at -80°C. Inflammatory mediators and SIgA were measured through Sandwich ELISA method.

Twenty participants with COPD (73±7y; 70%♂; FEV1%p 46±14) were enrolled. Mean levels of IL-8 were similar between patients with COPD and healthy subjects. No other trend or significant result was observed. IL-6 was not detected in most samples. Interestingly, a trend for an increase of SIgA during PR was observed. Significant but weak correlations between SIgA level and handgrip (r2= 0,2832) during PR and between SIgA level and 6MWT (r2= 0,3352) after PR were found. Overall, our study suggests that PR influences the immune response of patients with COPD.

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